Object-oriented programming is programming based on the concept of objects.

Take an example,

In Code:Block, program looks like this

```cpp
1    #include <iostream>
2    #include <string>
3    using namespace std;
4
5    class Student {          // Class name
6      public:                // Access specifier
7        int id;              // Attribute (int variable)
8        string name;  // Attribute (string variable)
9    };
10
11   int main() {
12      Student obj;  // Object of class Student
13
14      // Access attributes and set values using object
15      obj.id = 30;
16      obj.name = "EasyExamNotes.com";
17
18      // Print values using object
19      cout << obj.id << "\n";
20      cout << obj.name;
21      return 0;
22   }
23
```

In above program, class Student contains the variables id and name.

```cpp
class Student {
  public:
```

```
    int id;
    string name;
};
```

To access the variables id and name from the class Student, there is the need of an object for the class Student.

Syntax to create object:

```
ClassName ObjectName;
```

Objects for a class are always created in a function. Here object is created in a main function.

```
int main() {
  Student obj;
  return 0;
}
```

Now with the help of object obj, members of class Student are accesible.

Syntax to access class members using objects:

```
ObjectName.ClassMemberName;
```

Using object obj, assign a value to variable id and name.

```
obj.id = 30;
obj.name = "EasyExamNotes.com";
```

To print the values of variables code is,

```
cout << obj.id << "\n";
cout << obj.name;
```
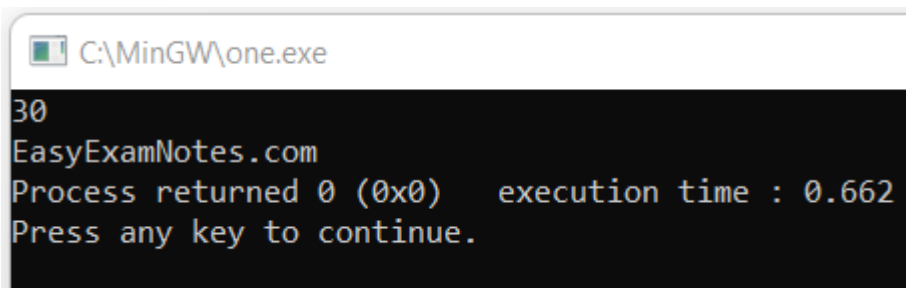
C++ program to implement use of object

```
#include <iostream>
#include <string>
using namespace std;

class Student {
  public:
    int id;
    string name;
};

int main() {
  Student obj;

  obj.id = 30;
  obj.name = "EasyExamNotes.com";
```

```
    cout << obj.id << "\n";
    cout << obj.name;
    return 0;
  }
```

Output

C:\MinGW\one.exe

```
30
EasyExamNotes.com
Process returned 0 (0x0)   execution time : 0.662
Press any key to continue.
```

Now it will be easy to write some theory points on object oriented programming.

- Object oriented programming involve use of object.
- Object is like a key for any class.
- Class members are accessible, only in the function wehre object is created.
- A class can have more than one object.
- Without class there is no existence of object.

What is class in OOP ?

- A class is like a blueprint for an object.
- Class is like a container, to store data and functions.
- Class is a user defined data type.

- When a class is defined no memory allocated without object.
- In above program, Student is like a variable whose data type is Class.

We will read more about class in the next article.

What is an Object of a class ?

- An Object is an instance of a Class.
- Object makes class members accessible.
- Objects are runtime entities.
- When object is created, memory is allocated to the class.

Some other examples of OOP ?

C++, Python, Java, C Sharp dot net, etc.

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